

Section 5

List of Replaceable Parts

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LIST OF REPLACEABLE PARTS

5-1. INTRODUCTION

5-2. This section contains an illustrated listing of replaceable parts for the 8050A Digital Multimeter. Ordering procedures for parts and a cross-reference to federal supply codes are also provided in this section. Both mechanical and electrical components are listed by reference designators. Each assembly is accompanied by an illustration showing the part location and its reference designator.

5-3. PARTS ORDERING INFORMATION

5-4. Electrical components may be ordered directly from the manufacturer by using the manufacturer's part number, or from the John Fluke Mfg. Co., Inc. and its authorized representatives by using the part number under the heading FLUKE STOCK NO. Final assemblies are normally not available as a whole assembly.

5-5. To ensure prompt delivery of the correct part, include the following information.

1. Fluke Stock Number.
2. Description (as given under the DESCRIPTION heading).
3. Reference Designator.
4. Quantity.
5. Part Number and Revision Level of component's pcb.

5-6. Parts price information is available from the John Fluke Mfg. Co., Inc. or its representatives.

Table 5-1. 8050A Final Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
	FINAL ASSEMBLY FIGURE 5-1 (8050A)	8050A	LINE	MODEL			
A1	MAIN PCB ASSEMBLY (LINE)				1		
F1	FUSE, FAST-ACT, 2A	376582	71400	AGX-2	1	5	
F2	FUSE, FIBRE, 3A, 600V	475004	71400	BBS-3	1	5	
H1	SCREW, PHP, 6-32 X 1/4	385401	73734	19042	7		
H2	SCREW, PHP, 6-32 X 1/2	320051	89536	320051	2		
H3	SCREW, RHP, 4-40 X 1/4	256156	89536	256156	5		
H4	SCREW, THD-FORMING, 5/20 X 5/16	494641	89536	494641	4		
H5	SCREW, SEMS, 6-32 X 1/4	178533	89536	178533	3		
H6	SCREW, PHP, 6/32 X 3/8	288266	89536	288266	2		
H7	WASHER, #6 FLAT	340505	89536	340505	2		
J1	CABLE, DISPLAY INTERCONNECT	507723	89536	507723	1		
LCD1	DISPLAY, LIQUID CRYSTAL	507673	89536	507673	1	1	
MP1	BEZEL, LCD	479642	89536	479642	1		
MP2	BRACKET, LCD	471730	89536	471730	1		
MP3	BUTTON, SWITCH (FUNCTION)	425900	89536	425900	4		
MP4	BUTTON, SWITCH (GREEN)	510271	89536	510271	1		
MP5	BUTTON, GRAY (OFFSET)	510164	89536	510164	1		
MP6	BUTTON, SWITCH (RANGE)	426759	89536	426759	6		
MP7	DECAL, CSA	525527	89536	525527	1		
MP8	CONNECTOR, ELASTOMERIC	453092	89536	453092	1		
MP9	FUSE HOLDER ASSEMBLY TO ORDER FUSE CAP ONLY, SEE MP12.	516039	89536	516039	1		
MP10	INSERT, SILICONE	525139	89536	525139	2		
MP11	INSULATOR	495044	89536	495044	1		
MP12	CAP, FUSE (FOR SEPARATE ORDER)	507699	89536	507699		1	
MP13	DECAL, DISC (ON HANDLE)	478248	89536	478248	2		
MP14	PANEL, FRONT	510156	89536	510156	1		
MP15	RECEPTACLE, AC	471029	89536	471029	1		
MP16	RETAINER, FLEX	510198	89536	510198	2		
MP17	SHIELD, INSULATOR	516021	89536	516021	1		
MP18	SHIELD, MAIN	510172	89536	510172	1		
MP19	SHIELD, TOP	510180	89536	510180	1		
MP20	INSULATOR, PCB	525196	89536	525196	1		
MP21	DECAL, FRONT PANEL	507657	89536	507657	1		
MP22	CASE, EXTERIOR PLASTIC	478008	89536	478008	1		
MP23	HANDLE, MOLDED PLASTIC	330092	89536	330092	1		
MP24	DECAL, SPECIFICATION	507665	89536	507665	1		
MP25	TEST LEAD W/PROBE (Y8132)	516666	89536	516666	1		
MP30	DECAL, FACTORY MUTUAL	524611	89536	524611	1		
MP31	JUMPER ASSY. (FOR U5)	537514	89536	537514	1	1	
MP32	JUMPER ASSY. (FOR U33)	537522	89536	537522	1	1	
MP33	BOX, UNIT SHIPMENT	697821	89536	697821	1		
MP34	BOX LINER	723155	89536	723155	1		
W1	LINE CORD	343723	89536	343723	1		
TM1	INSTRUCTION MANUAL (8050A)	530907	89536	530907	1		
	RECOMMENDED SPARE PARTS KIT (8050A)	533919	89536	533919	AR		

LIST OF REPLACEABLE PARTS

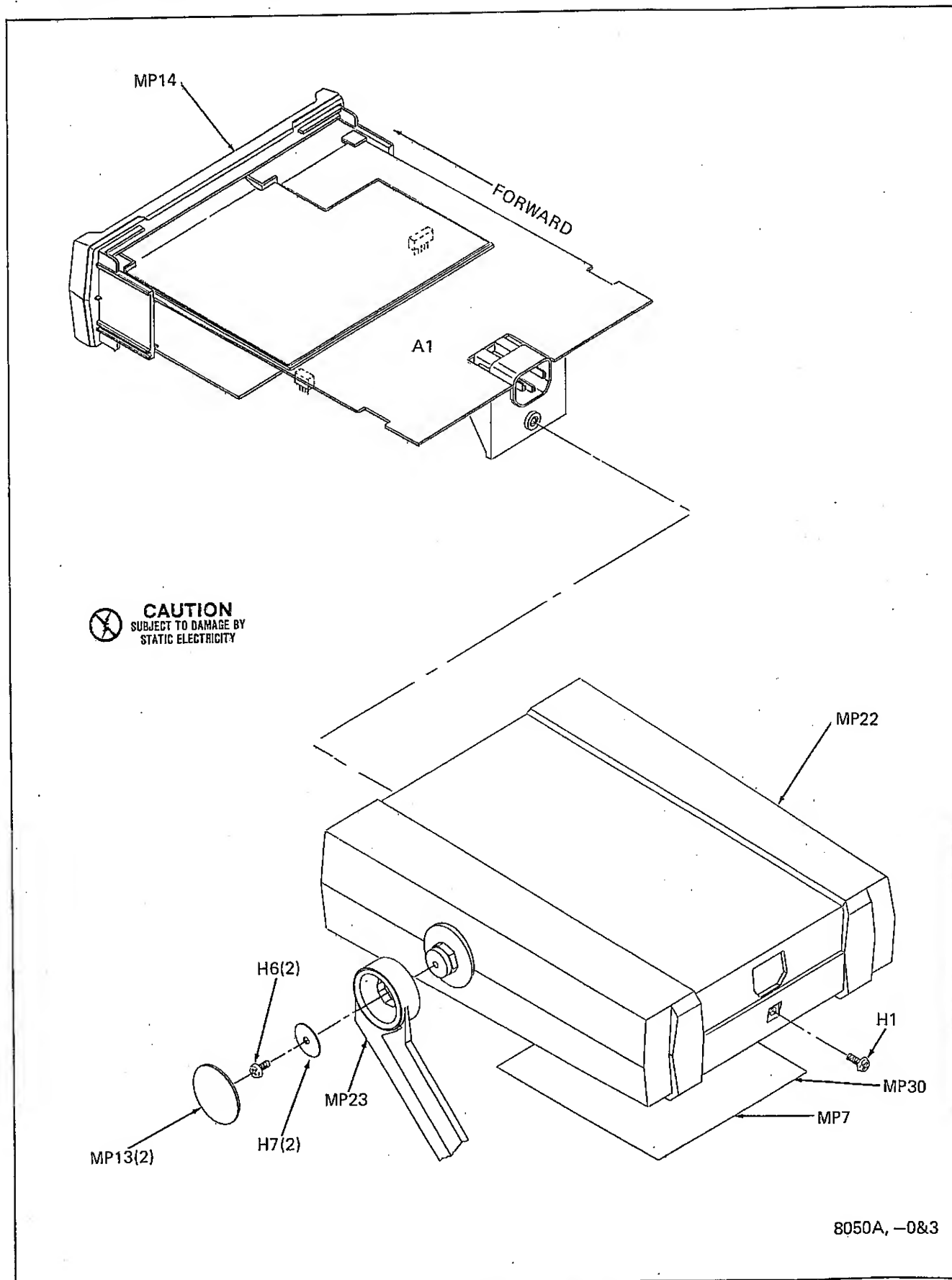
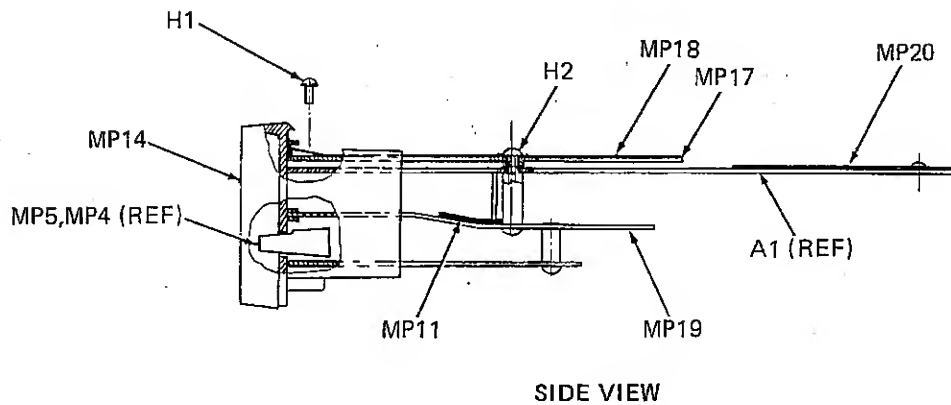
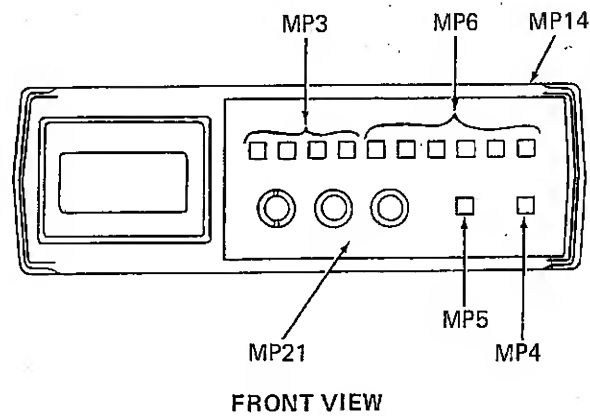
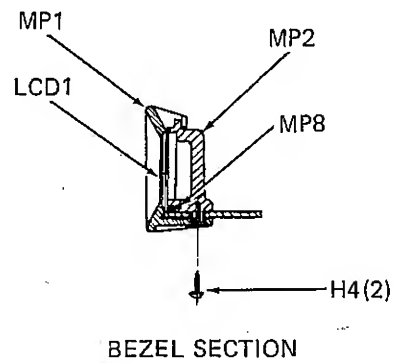


Figure 5-1. 8050A Final Assembly



CAUTION
SUBJECT TO DAMAGE BY
STATIC ELECTRICITY

8050A-4001

Figure 5-1. 8050A Final Assembly (cont)

LIST OF REPLACEABLE PARTS

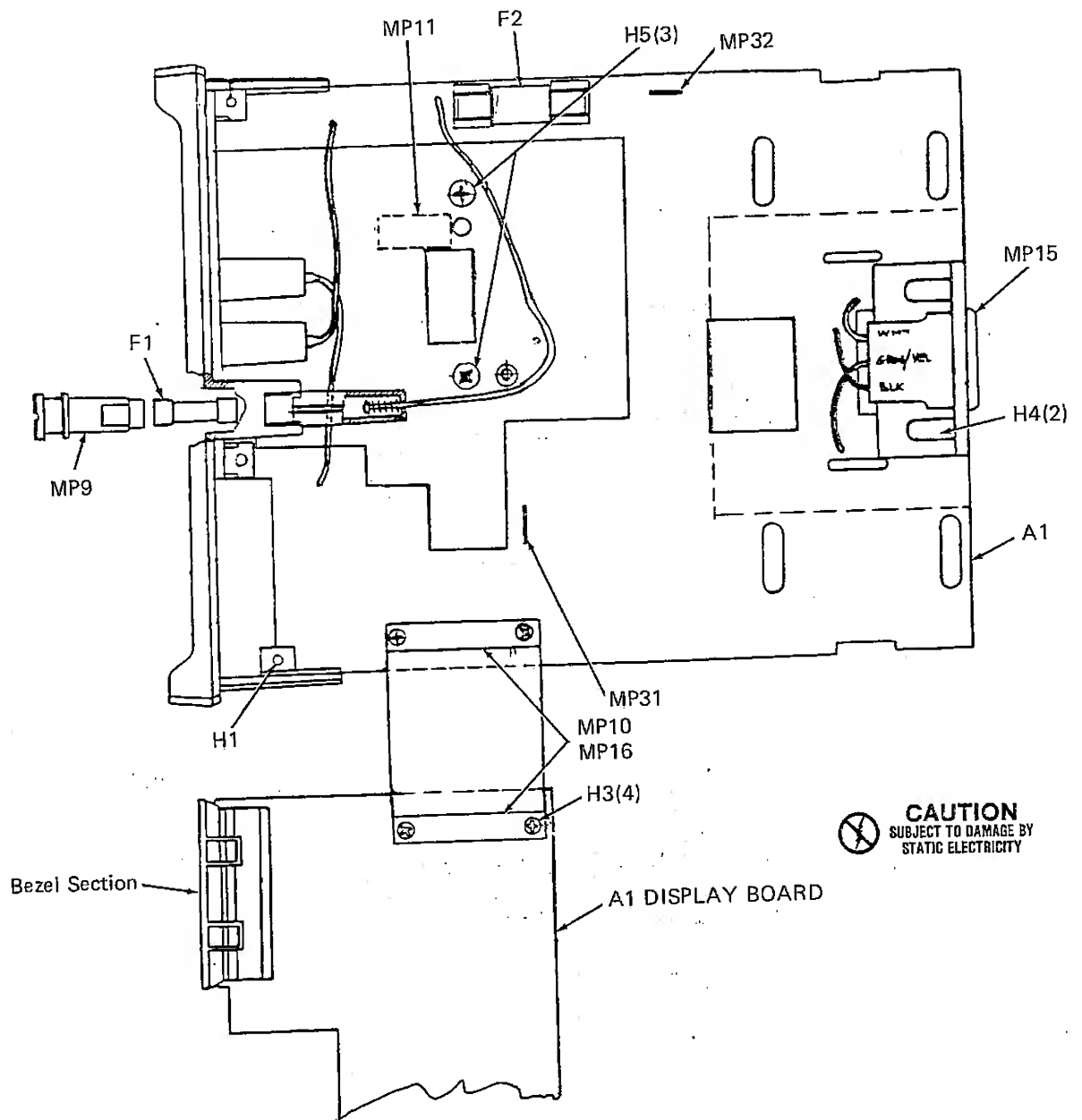


Figure 5-1. 8050A Final Assembly (cont)

Table 5-2. A1 Main PCB Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
A1	MAIN PCB ASSEMBLY FIGURE 5-2 (8050A-4001AA1)			LINE MODEL			1 2
C1	CAP, VAR, 1-5-0.25 PF, 2000V	218206	72982	530-000	2		
C2	CAP, VAR, 1-5-0.25 PF, 2000V	218206	72982	530-000	REF		
C3	CAP, MICA, 120 PF +/-5%, 500V	148486	72136	DM15F121J	2		
C4	CAP, MICA, 120 PF +/-5%, 500V	148486	72136	DM15F121J	REF		
C5	CAP, MICA, 1800 PF +/-5%, 500V	148353	89536	148353	1		
C6	CAP, POLYPROP, 10 UF +/-10%, 100V	446781	89536	446781	1		
C7	CAP, POLYEST, 1.0 UF +/-10%, 100V	447847	37445	C280MAH/AIM	1		
C8	CAP, TA, 10 UF +/-20%, 15V	193623	56289	196D106X0015A1	4		
C9	CAP, POLYPROP, .22 UF +/-10%, 100V	446799	89536	446799	1		
C10	CAP, POLYESTER, .022 UF +/-10%, 1000V	448183	52763	PKT. 1822 322/10	1		
C11	CAP, MYLAR, .047 UF +/-10%, 250V	162008	73445	C280MAE/A47K	2		
C12	CAP, ELECT, 470 UF -10/+75%, 16V	501510	89536	501510	2		
C13	CAP, ELECT, 470 UF -10/+75%, 16V	501510	89536	501510	REF		
C14	CAP, TA, 10 UF +/-20%, 15V	193623	56289	196D106X0015A1	REF		
C15	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1	1		
C16	CAP, ELECT, 220 UF -10/+75%, 25V	484071	89536	484071	2		
C17	CAP, ELECT, 220 UF -10/+75%, 25V	484071	89536	484071	REF		
C18	CAP, ELECT, 22 UF -10/+75%, 16V	436840	89536	436840	2		
C19	CAP, ELECT, 22 UF -10/+75%, 16V	436840	89536	436840	REF		
C25	CAP, CER, 1000 PF +/-20%, 100V	149153	56289	C0238101F103M	3		
C26	CAP, CER, 1000 PF +/-20%, 100V	149153	56289	C0238101F103M	REF		
C27	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D226X0020HA1	1		
C28	CAP, POLYPROP, .047 UF +/-10%, 100V	446773	89536	446773	1		
C29	CAP, MICA, 180 PF +/-5%, 500V	148460	72136	DM15F181J	1		
C30	CAP, MICA, 68 PF +/-5%, 500V	148510	72136	DM15F680J	1		
C31	CAP, MYLAR, .047 UF +/-10%, 250V	162008	73445	C280MAE/A47K	REF		
C32	CAP, CERAMIC, 1000 PF +/-10%, 500V	357806	56289	C0168102G-102K	3		
C33	CAP, TA, 10 UF +/-20%, 15V	193623	56289	196D106X0015A1	REF		
C35	CAP, CERAMIC, 1000 PF +/-10%, 500V	357806	56289	C0168102G-102K	REF		
C36	CAP, CERAMIC, 1000 PF +/-10%, 500V	357806	56289	C0168102G-102K	REF		
C37	CAP, CER, .025 UF +/-20%, 100V	168435	56289	C0238101H253M	1		
C38	CAP, ELECT, 47 UF +/-20%, 10V	613984	89536	613984	2		
C39	CAP, ELECT, 47 UF +/-20%, 10V	613984	89536	613984	REF		
C40	CAP, MICA, 330 PF +/-5%, 500V	148445	72136	DM15F331J	1		
C41	CAP, ELECT, 10 UF +/-20%, 16V	614859	89536	614859	2		
C42	CAP, TA, 10 UF +/-20%, 15V	193623	56289	196D106X0015A1	REF		
C43	CAP, CER, 1000 PF +/-20%, 100V	149153	56289	C0238101F103M	REF		
C44	CAP, ELECT, 10 UF +/-20%, 16V	614859	89536	614859	REF		
CL1	DIODE, FED, CURRENT REGULATOR	393454	07910	TCR5290	1		1
CR1	DIODE, SI, RECTIFIER, 2 AMP, 50 VOLT	347559	14099	1N5400	1		1
CR2	DIODE, SI, LO-CAP/LO-LEAK	348177	07263	FD7223	3		1
CR3	DIODE, SI, LO-CAP/LO-LEAK	348177	07263	FD7223	REF		
CR12	DIODE, SI, LO-CAP/LO-LEAK	348177	07263	FD7223	REF		
MP1	SPRING, COMPRESSION COIL	422824	83553	C0240-026-0500-S	1		
MP2	SUPPORT, HYBRID (TO U32)	515635	89536	515635	2		
MP6	SUPPORT, RESISTOR	545079	89536	545079	1		
MP7	CLIP, COMPONENT	516880	89536	516880	2		
MP8	SPACER, SWAGED	525154	89536	525154	4		
MP9	SPACER, STANDOFF	295089	89536	295089	2		
Q1	XSTR, SI, NPN	218396	89536	218396	3		1
Q2	XSTR, SI, NPN	218396	89536	218396	REF		
Q3	XSTR, SI, NPN (METAL)	329698	89536	329698	1		1
Q4	XSTR, SI, PNP	225599	07263	2N4250	2		1
Q7	XSTR, FIELD EFFECT (FET)	370072	89536	370072	2		1
Q8	XSTR, FIELD EFFECT (FET)	370072	89536	370072	REF		
Q11	XSTR, SI, PNP	195974	04713	2N3906	1		1
Q12	XSTR, SI, NPN	168716	07263	517254	1		1
Q14	XSTR, SI, PNP (SELECTED)	380394	89536	380394	3		1
Q15	XSTR, SI, PNP (SELECTED)	380394	89536	380394	REF		
Q16	XSTR, SI, PNP	225599	07263	2N4250	REF		
Q17	XSTR, SI, PNP (SELECTED)	380394	89536	380394	REF		
Q18	XSTR, SI, NPN	218396	89536	218396	REF		

LIST OF REPLACEABLE PARTS

Table 5-2. A1 Main PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
Q19	XSTR, FET, DUAL N-CHANNEL	419283	89536	419283	1	1	
R1	RES, COMP, 100K +/-10%, 1W	109397	01121	G81041	1		
R2	RES, WJ, 1000 +/-10%, 2W	474080	89536	474080	1		
R3	RES, MTL. FILM, 1000 +/-5%, 1/10W	514265	89536	514265	1		
R5	RES, CER, 100K +/-10%, 1/2W	529099	89536	529099	1		
R6	RES, VAR, 100 +/-10%, 1/2W	529115	89536	529115	1		
R7	RES, VAR, CER, 1K +/-10%, 1/2W	513259	89536	513259	1		
R8	RES, COMP, 220K +/-10%, 2W	110197	01121	H81011	1		
R11	RES, VAR, CER, 500 +/-10%, 1/2W	447730	89536	447730	1		
R12	RES, CERMET, 200 +/-10%, 1/2W	474973	89536	474973	1		
R14	RES, DEP. CAR, 1M +/-5%, 1/4W	348987	80031	CR251-4-5P1M	4		
R15	RES, DEP. CAR, 20 +/-5%, 1/4W	442202	80031	CR251-4-5P20E	1		
R16	RES, MTL. FILM, 900 +/-0.1%, 1/8W	461988	91637	CMF55901	1		
R17	RES, MTL. FILM, 90 +/-0.1%, 1/8W	461970	91637	CMF55902	1		
R18	RES, WJ, 9 +/-15%, 1W	461962	89536	461962	1		
R19	RES, COMP, 100K +/-5%, 2W	285056	89536	285056	1		
R20	RES, COMP, 2.2M +/-10%, 1/2W	108225	89536	285056	1		
R21	RES, COMP, 22M +/-5%, 1/4W	221986	01121	C82265	1		
R22	RES, DEP. CAR, 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	3		
R23	RES, DEP. CAR, 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	REF		
R24	RES, COMP, 4.7M +/-5%, 1/4W	220046	01121	C84755	4		
R29	RES, VAR, 1M +/-10%, 1/2W	485052	89536	485052	1		
R30	RES, DEP. CAR, 470K +/-5%, 1/4W	342634	80031	CR251-4-5P470K	1		
R32	RES, DEP. CAR, 1M +/-5%, 1/4W	348987	80031	CR251-4-5P1M	REF		
R33	RES, DEP. CAR, 1M +/-5%, 1/4W	348987	80031	CR251-4-5P1M	REF		
R36	RES, DEP. CAR, 15K +/-5%, 1/4W	348854	80031	CR251-4-5P15K	1		
R37	RES, COMP, 4.7M +/-5%, 1/4W	220046	01121	C84755	REF		
R38	RES, DEP. CAR, 15K +/-5%, 1/4W	348854	80031	CR251-4-5P15K	REF		
R39	RES, MTL. FILM, 232K +/-1%, 1/8W	276618	91637	CMF552323	1		
R40	RES, DEP. CAR, 680 +/-5%, 1/4W	348779	80031	CR251-4-5P680E	1		
R42	RES, DEP. CAR, 27K +/-5%, 1/4W	441501	80031	CR251-4-5P27K	1		
R43	RES, DEP. CAR, 750K +/-5%, 1/8W	442525	80031	CR251-4-5P750K	1		
R44	RES, DEP. CAR, 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	REF		
R45	RES, COMP, 4.7M +/-5%, 1/4W	220046	01121	C84755	REF		
R46	RES, FXD, 24K +/-5%, 1/4W	442384	80031	CR251-4-5P24K	1		
R48	RES, DEP. CAR, 15K +/-5%, 1/4W	348854	80031	CR251-4-5P15K	REF		
R49	RES, DEP. CAR, 27K +/-5%, 1/4W	441501	80031	CR251-4-5P27K	1		
R52	RES, COMP, 47M +/-10%, 1/2W	146415	89536	146415	1		
R53	RES, COMP, 4.7M +/-5%, 1/4W	220046	01121	C84755	REF		
R54	RES, DEP. CAR, 1M +/-5%, 1/4W	348987	80031	CR251-4-5P1M	REF		
R55	RES, DEP. CAR, 470K +/-5%, 1/4W	342634	80031	CR251-4-5P470K	1		
R56	RES, CAR. DEP, 1 +/-5%, 1/4W	357645	80031	CR251-4-5P1E	1		
RT1	THERMISTOR	446849	50157	180Q10200	1		1
RV1	VARISTOR	447672	09214	V430MA7	3		3
RV2	VARISTOR	447672	09214	V430MA7	REF		
RV3	VARISTOR	447672	09214	V430MA7	REF		
S1-S10	SWITCH ASSEMBLY	507707	89536	507707	1		
S11	SWITCH	473736	89536	473736	2		
S12	SWITCH	473736	89536	473736	REF		
T1	TRANSFORMER, POWER	ORDER	FOR	APPROPRIATE VOLTAGE	1		
	120V	512939	89536	512939			
	100V	513283	89536	513283			
	240V	513291	89536	513291			
	115V, 60Hz	512939	89536	512939			
TP1-5	TERMINAL PINS	379438	89536	379438	12		
TP7-13							
U1	RESISTOR NETWORK	501080	89536	501080	1		1
U2	RESISTOR NETWORK	512905	89536	512905	1		4
U3	RESISTOR NETWORK	513556	89536	513556	1		
U4	RESISTOR NETWORK	513580	89536	513580	1		1
U5	RESISTOR NETWORK	519736	89536	519736	1		1
U6	IC, RES, 2-RESISTOR SHUNT	461491	89536	461491	1		1
U7	IC, OP-AMP, DUAL, COMPENSATED, 8-PIN DIP	418566	18324	LM359N/CR3999	2		
U8	IC, OP-AMP, DUAL, COMPENSATED, 8-PIN DIP	418566	18324	LM359N/CR3999	REF		

LIST OF REPLACEABLE PARTS

Table 5-2. A1 Main PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
U9	IC, LOW POWER, DUAL VOLTAGE COMPARATOR	478354	01295	LM393N	2	1	
U10	IC, C-MOS, LIQUID-CRYSTAL 4-SEGMENT	453225	02735	CD4054BE	3	1	
U11	IC, C-MOS, LIQUID-CRYSTAL 4-SEGMENT	453225	02735	CD4054BE	REF		
U12	IC, C-MOS, LIQUID-CRYSTAL DSDLY DRIVERS	507376	02735	CD4056BE	4	1	
U13	IC, C-MOS, LIQUID-CRYSTAL DSDLY DRIVERS	507376	02735	CD4056BE	REF		
U14	IC, C-MOS, LIQUID-CRYSTAL DSDLY DRIVERS	507376	02735	CD4056BE	REF		
U15	IC, C-MOS, LIQUID-CRYSTAL DSDLY DRIVERS	507376	02735	CD4056BE	REF		
U16	IC, C-MOS, LIQUID-CRYSTAL 4-SEGMENT	453225	02735	CD4054BE	REF		
U17	IC, C-MOS, SI, N-CHANNEL, 40 PIN DIP	524900	89536	524900	1	1	
U18	IC, SELECTED (8050A-4506)	515999	89536	515999	1	1	
U19	IC, SELECTED (8050A-4506-01)	516005	89536	516005	2	1	
U20	IC, SELECTED (8050A-4506-01)	516005	89536	516005	REF		
U21	IC, OPERATIONAL AMP. (8050A-4504)	609883	89536	609883	2	1	
U22	IC, C-MOS, QUAD BILATERAL SWITCH, 14-PIN	363838	12040	MM5616AN	1	1	
U23	IC, OPERATIONAL AMP. (8050A-4504)	609883	89536	609883	REF		
U24	VOLTAGE REGULATOR	507434	89536	507434	1	1	
U25	VOLTAGE REGULATOR	507442	89536	507442	1	1	
U27	RESISTOR NETWORK	513598	89536	513598	1	1	
U28	RECTIFIER BRIDGE	418582	83003	VM08	2	1	
U29	RECTIFIER BRIDGE	418582	83003	VM08	REF		
U31	IC, LOW POWER, DUAL VOLTAGE COMPARATOR	478354	01295	LM393N	REF		
U32	HYBRID RMS TO DC CONVERTER	510685	89536	510685	1		
U33	RESISTOR NETWORK	513564	89536	513564	1	1	
U34	RESISTOR NETWORK	519728	89536	519728	1	1	
VR1	DIODE, ZENER	387217	89536	387217	1	1	
W1	WIRE ASSEMBLY (RED)	537159	89536	537159	1		
W2	WIRE ASSEMBLY (BLK)	537167	89536	537167	1		
W3	WIRE ASSEMBLY (WHT)	489096	89536	489096	1		
W4	WIRE ASSEMBLY (BLK)	489104	89536	489104	1		
W5	WIRE ASSEMBLY (WHT)	489120	89536	489120	1		
W6	WIRE ASSEMBLY (GRN, YEL)	489112	89536	489112	1		
XU17	SOCKET, IC	429282	09922	D1LB40P-108	1		
XU18-20	SOCKET, 14-PIN	276527	09922	D1LB8P-108	3		
Y1	CRYSTAL, 4 MHZ	474072	89536	474072	1		
1	Please be aware of voltage changes.						
2	Certain components may not be used therefore may not be installed.						
3	U1 P/N 510941 may be used in place of P/N 501080						
4	U2 P/N 510834 may be used in place of P/N 512905.						

LIST OF REPLACEABLE PARTS

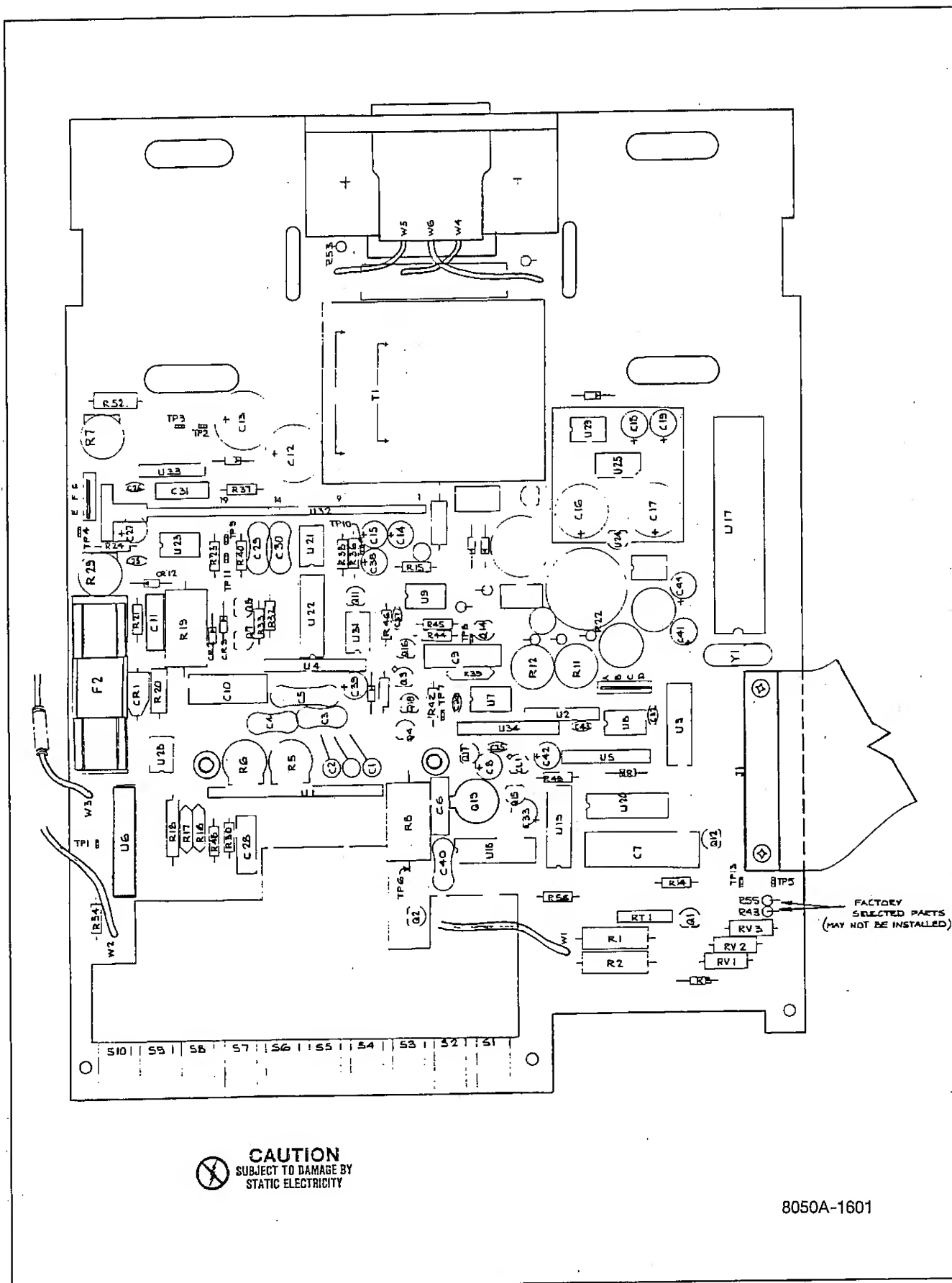
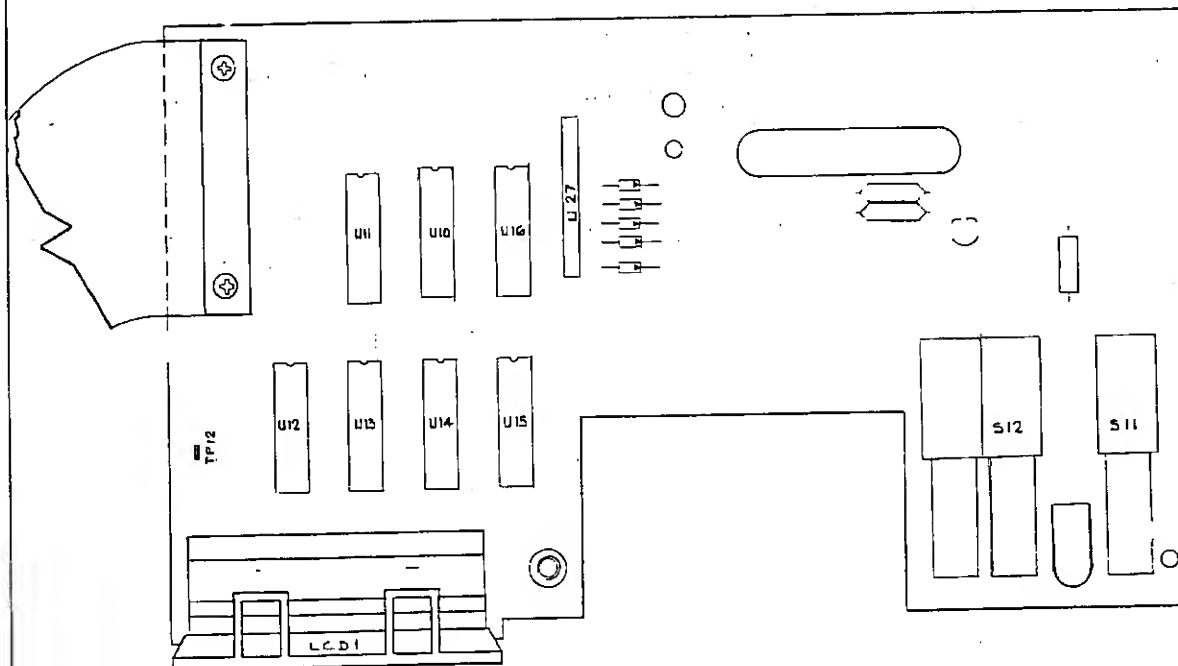


Figure 5-2. 8050A A1 Main PCB Assembly



8050A-1601

Figure 5-2. 8050A A1 Main PCB Assembly (cont)